AUSTRALIAN Clinicallabs

Molecular Genetics

Supporting you with advanced insights in precision medicine

Our Centre of Excellence: a focus on innovation

At Clinical Labs, we aspire to provide leadership and diagnostic excellence across all of our specialties and our commitment to Molecular Genetics is no exception. In addition to leading the industry in traditional molecular analysis with ground-breaking core laboratories, our Molecular Genetics Centre of Excellence offers an innovative platform where our pathologists focus their expertise on a comprehensive range of tests dedicated exclusively to Molecular Genetics.

For many years, Clinical Labs has been at the forefront of advanced molecular testing in Australia. We were an early adopter of Harmony NIPT and Genetic Carrier Screening and were the first major laboratory in Australia to introduce the Liquid Biopsy cancer screening test in early 2018.

At Clinical Labs, we continue to expand our precision medicine services with our NATA-accredited state-of-the-art Molecular Genetics laboratory in Clayton, Victoria offering a comprehensive range of Cancer, Pharmacogenetic and Antenatal testing services.

Antenatal Testing Services

Harmony NIPT

Clinical Labs is proud to be Australia's only provider of Harmony non-invasive prenatal testing including 22q11.2 microdeletion. Harmony is the most broadly studied NIPT for Down syndrome (trisomy 21), Edwards syndrome (trisomy 18) and Patau syndrome (trisomy 13). Using state-of-the-art, cell-free DNA (cfDNA) technology, the Harmony test carries a >99% accuracy rate for Down syndrome with a low false-positive rate of 0.1%.

Genetic Carrier Screening

Clinical Labs offers several genetic carrier screening tests that are highly sensitive in identifying individuals at risk.

Gene Access Carrier Screening

Gene Access gives patients information regarding their chances of having a child with cystic fibrosis (CF), fragile X syndrome (FXS) or spinal muscular atrophy (SMA).

Comprehensive Carrier Screening

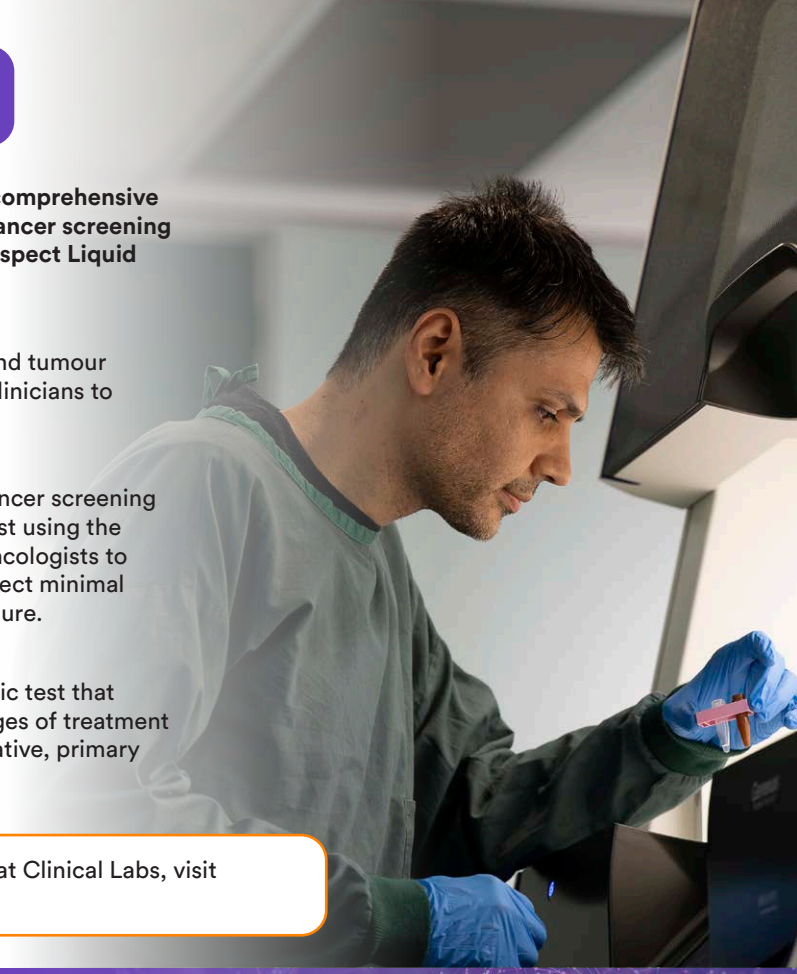
A comprehensive test that involves the screening of 302 genes and is appropriate for patients of all ethnicities. The test evaluates an individual's carrier status for more than 100 inherited diseases by analysing up to 400 genetic mutations.

Ashkenazi Jewish Carrier Screening

Carrier screening for eight autosomal recessive conditions that are more common amongst people of Ashkenazi Jewish ancestry. These include Tay–Sachs disease, Canavan disease, Niemann–Pick disease, Bloom syndrome, cystic fibrosis, Fanconi anaemia, familial dysautonomia and mucolipidosis IV.

To find out more about our comprehensive range of Antenatal testing services, visit antenatal.clinicallabs.com.au/doctor

Molecular Cancer Testing Services



Our NATA-accredited Molecular Genetics laboratory offers a comprehensive selection of market-leading, innovative, accurate and timely cancer screening services – from Somatic Mutation testing in solid tumours to Aspect Liquid Biopsy and beyond.

Somatic Mutation in Solid Tumours

Somatic Mutation testing detects mutations within oncogenes and tumour suppressor genes that are frequently mutated in cancer, aiding clinicians to select the most appropriate treatment for their patients.

Aspect Liquid Biopsy: ctDNA Testing in Plasma

Aspect Liquid Biopsy is a non-invasive, safe and ultrasensitive cancer screening option that identifies genomic alterations from a simple blood test using the circulating tumour DNA (ctDNA). Aspect Liquid Biopsy allows oncologists to choose a targeted therapy, monitor treatment resistance and detect minimal residual disease, without patients undergoing an invasive procedure.

EndoPredict® for Breast Cancer

EndoPredict® for Breast Cancer is an in vitro multi-gene diagnostic test that provides highly important and clear information for different stages of treatment planning for patients with estrogen receptor positive, HER2-negative, primary breast cancer.

To find out more about the Molecular Cancer Services available at Clinical Labs, visit clinicallabs.com.au/molecularcancerservices

Pharmacogenetic Testing Services

Pharmacogenetics (PGx), an important part of precision medicine, is the study of how genetic variability influences drug treatment outcomes. Recommended by Guidelines, many medications currently prescribed have pharmacogenetic data to support appropriate dosing or selection.

Clinical Labs offers a comprehensive range of pharmacogenetic testing in order to provide Clinicians and healthcare providers with important information to help decide on the most appropriate treatment for each individual, particularly in areas such as mental health, pain management, cardiology and oncology.

To find out more about Pharmacogenetic Testing available at Clinical Labs, visit clinicallabs.com.au/pharmacogenetictesting

About Associate Professor Mirette Saad

National Director of Molecular Genetics at Australian Clinical Labs

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Associate Professor Mirette Saad is a Consultant Chemical Pathologist and the National Director of Molecular Genetics at Australian Clinical Labs. She has a Fellowship with honours in Chemical and Molecular Pathology, with Microbiology sub-speciality, from Suez Canal University, Egypt. A/P Saad received her NHMRC sponsored PhD degree in Cancer Genetics from Melbourne University and Peter MacCallum Cancer Institute. Along with her teaching and research roles, A/P Saad is a registered medical practitioner with AHPRA, a Chemical Pathology Fellow (FRCPA) at the Royal College of Pathologists of Australasia and a Member of the Australasian Association of Clinical Biochemists (MAACB). She is a Chair of the RCPA Chemical Pathology Advisory Committee, a Member of the RCPA Genetic Advisory Committee, AACB and a Chair of the Precision Medicine Services at Australian Clinical Labs. At Clinical Labs, A/Prof Mirette Saad leads the Molecular Genetic testing for non-invasive prenatal testing (NIPT), antenatal screening, personalised drug therapy and cancer.

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